## ABSTRACT

An IPv6 mobile packet communication network in which mobile VPN service can be provided without having to use a mobile tunnel. A control signal for enabling packet data transmission and reception is sent from a mobile terminal to a gateway node. Using destination-of-connection information contained in the control signal, the gateway node checks whether mobile VPN service is requested or not. Upon detection of a mobile VPN service request, the gateway node returns IP address information of the gateway node to the mobile terminal via a subscriber node. The mobile terminal then assembles an IPv6 header (210) and an IPv6 routing header (220) so that packet data will be unexceptionally transferred through the gateway node.